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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,600	12/14/2001	Robert Frischholz	BOE01 003	6899

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WASHINGTON, DC 20006

EXAMINER
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LAVIN, CHRISTOPHER L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/889,600	FRISCHHOLTZ, ROBERT	
	Examiner	Art Unit	
	Christopher L. Lavin	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 19-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 19-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 2, 23, 24, 30, and 31 are rejected under 35 U.S.C. 102(a) as being anticipated by Puma (5,729,619).

In regards to claim 1, Puma discloses A method of securing forgery in biometrical identification of persons which includes detecting at least one biological characteristic of a person and transforming it into personal data in order to recognize the person (col. 6, lines 23 – 65: The iris is transformed into features, personal data, which is used to recognize the person.) wherein before, during or after the detecting at least one biological characteristic, the person is caused to carry out a controllable motion (col. 5, line 61 – col. 6, line 1: The person will be required to move his or her head to get into proper position for the projection to focus), and a condition precedent to the biometrical identification is verification of the presence of the person based on said motion being detected, wherein said controllable motion is previously unknown to the person (col. 5, line 61 – col. 6, line 1; col. 6, line 66 – col. 7, line 10: The person would not know the exact motion required before initiating the motion to print the projection into focus. The method inherently must be able to detect when the eye is in position, in order to perform verification. Thus the motion is detected, which determines the presence of the person.

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A video image or picture would not be able to move itself into proper position for imaging and thus the verification method would fail.).

In regards to claim 2, The method of claim 1, wherein a line of sight of the person is controlled and position of the eyes is detected (col. 5, line 61 – col. 6, line 1; col. 6, line 66 – col. 7, line 10).

In regards to claim 23, The method of claim 1, wherein the motion is detected before, after of during the identification of the person (col. 5, line 61 – col. 6, line 1; col. 6, line 66 – col. 7, line 10).

In regards to claim 24, A system of securing forgery in biometrical identification of persons, comprising a detector means for detecting at least one biological characteristic of a person and a processing means for transforming the characteristic detected into personal data, comprising: a directing means for inducing a certain motion of the person, the motion being detected by the detector means wherein said processing means verifies whether the person is actually present in dependence of the detection result (col. 5, line 61 – col. 6, line 1; col. 6, line 66 – col. 7, line 10: The person would not know the exact motion required before initiating the motion to print the projection into focus. The system inherently must be able to detect when the eye is in position, in order to perform verification. Thus the motion is detected, which determines the presence of the person. A video image or picture would not be able to move itself into proper position for imaging and thus the verification method would fail.).

In regard to claim 30, A method of biometrical identification of persons comprising a method as claimed in Claim 1, wherein the person's data are compared with reference data (col. 6, lines 23 – 65).

In regards to claim 31, A system for biometrical identification of persons comprising a system as claimed in claim 24, wherein the processing means compares the person's data with reference data (col. 6, lines 23 – 65).

In regards to claim 32, In a system of identification of a person by comparison of a stored prerecorded biometric characteristic of the person in digitized form and an observed biometric characteristic of the person in digitized form, the method of preventing the fraudulent substitution of prerecorded biometric characteristics for the observed biometric characteristics, comprising: before, after, or during obtaining the observed biometric characteristic for use in the comparison, causing movement of the observed biometric characteristic to thereby eliminate the substitution of the prerecorded biometric characteristic for the observed characteristic in the comparison (col. 6, lines 23 – 65; col. 5, line 61 – col. 6, line 1; col. 6, line 66 – col. 7, line 10: The person would not know the exact motion required before initiating the motion to print the projection into focus. The system inherently must be able to detect when the eye is in position, in order to perform verification. Thus the motion is detected, which determines the presence of the person. A video image or picture would not be able to move itself into proper position for imaging and thus the verification method would fail.).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 5, 6, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puma.

In regards to claim 5, Puma discloses the method of claim 1. Puma discloses causing a person to carry out a motion (col. 5, line 61 – col. 6, line 1) but it seems to be implied that when Puma wants to obtain images of both eyes that the both eyes are imaged at the same time. However it would have been obvious to one having ordinary skill in the art at the time of the invention to image the eyes separately. If this was the case then the user would have to perform two different tasks to properly position each eye for imaging. Requiring the eyes to be imaged separately not only would save components and thus lower cost it could also add another layer of security requiring more user motion and thus further verifying the presence of a person.

In regards to claim 6, The method as claimed in claim 5, wherein a first target direction is predetermined for the motion and it is checked whether a first motion follows the predetermined target direction, and at least one other target direction is predetermined which differs from the first target direction, and it is checked whether at least a second motion follows this other target direction, and the biological characteristic of the person is detected if at least the first and second motions follow the respective target directions (col. 5, line 61 – col. 6, line 1; col. 7, lines 11 – 32: As previously discussed in claim 5, the user would have to perform two motions in different target directions. The biological characteristic will not be able to be identified if the person does not perform these motions.).

In regards to claims 19 and 20, wherein an alarm is given if the motions do not follow the target directions repeatedly in succession (col. 7, 28 – 40: If the user fails to perform the motions the verification process will fail and thus an alarm, in this case the engine is locked out.)

6. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Puma in view of Horwitz (5,963,300).

In regards to claim 3, Puma discloses the method of claim 2. Puma however, does not disclose determining whether a person's line of sight is directed to at a mark.

Horwitz discloses in the paragraph starting at column 3, line 43 that a strabismus measurement of the eye(s) is computed by measuring "the gaze (look) angle of the eye(s) and compares it to the respective angles of a target at which the eye(s) is tasked

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to look". As randomly is not further defined, it can be interpreted broadly; the mark would appear random to the user.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to detect the line of sight (as taught by Horwitz) before attempting to identify the person. Puma is focused on measuring features of the eye; line of sight is a feature of the eye. Ensuring the eye is looking in the correct direction adds another layer of security and further ensures the presence of the user.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Puma in view of Berry.

In regards to claim 25, Puma discloses the system of claim 24. Puma discloses a mark that directs the person's motion. As randomly is not further defined, it can be interpreted broadly; the mark would appear random to the user. Puma discloses projecting the mark, and displaying it on a monitor. However using a monitor to display an image is well known as shown by Berry (col.9, lines 10 – 30). Berry teaches of randomly moving a target on a monitor to track a user's eye motions.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to display the mark randomly on a screen (as taught by Berry) in the system disclosed by Puma. A screen might be able to provide better illumination, as well as possibly displaying instructions so the user knows what to do.

8. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner in view of Trew (5,561,718).



9. In regards to claim 21, Puma discloses a method where a facial image is taken (col. 6, lines 23 – 65) and digitized. However Puma does not use eye position for personal identification nor is the facial image compared.

10. Trew discloses in the paragraph starting at column 4, line 62 that the eyes are detected. Trew the discloses in lines 9 – 14 in column 5 that a feature vector of a face, including eye position is created and then compared to stored feature vectors to identify a person. This is equivalent to comparing the eye position to the rated eye position.

11. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to use eye position in feature recognition in the person identification method disclosed by Puma. Puma focuses on movements for detection, but by including facial features as well, the method disclosed by Puma can more accurately identify an individual.

12. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Puma as modified by Berry as applied to claim 25 above, and further in view of Trew.

13. In regards to claim 26, Puma (as modified by Berry) a system where a facial image is taken and digitized. As shown in claim 25 Puma discloses a directing means for controlling the person's line of sight. However Puma does not use eye position for personal identification.

14. Trew discloses in the paragraph starting at column 4, line 62 that the eyes are detected. Trew the discloses in lines 9 – 14 in column 5 that a feature vector of a face, including eye position is created and then compared to stored feature vectors to identify a person. This is equivalent to comparing the eye position to the rated eye position.

15. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to use eye position in feature recognition in the person identification system disclosed by Puma. Puma focuses on movements for detection, but by including facial features as well, the system disclosed by Puma can more accurately identify an individual.

16. Claims 4, 22, and 27 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puma in view of Faulkner (5,483,601).

17. In regards to claim 4, Puma discloses a method of identification of an individual that is based on movement information. Puma however does not disclose identifying an individual with biometrical data of the hands.

18. Faulkner discloses in the paragraph starting at column 7, line 18 a method of identifying an individual with biometrical data of the hands. Figure 11 shows a detection device (70) to control the hand movements of a person and detect the hand position. In the next paragraph Faulkner discloses “using the person’s hand, in this case, to verify that he is the enrolled person that he claims to be”.

19. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to use the hand recognition method disclosed by Faulkner with the method disclosed by Puma to determine a person’s identity. By adding in the hand recognition method disclosed by Faulkner Puma’s method will have more redundancy, checking more parameters and allowing for a more accurate and confident identification.

20. In regards to claim 22, Puma discloses a method of identification of an individual that is based on movement information. Puma however does not disclose identifying an individual with biometrical data of the hands.

21. Faulkner discloses in step a. of column 7 that a picture of a handprint is taken. Step b. discloses the step of digitizing the image. As shown in figure 10, Faulkner controls the location of the hand by the design of the digitalization plate (70), which has pegs (71, 62, 73). Step c. in column 8 discloses the step of analyzing the image and compared with previous data to produce hand feature data. In step f. of column 9 Faulkner discloses comparing the hand data with a digital reference image.

22. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention use the hand recognition method disclosed by Faulkner with the method disclosed by Puma to determine a person's identity. By adding in the hand recognition method disclosed by Faulkner Puma's method will have more redundancy, checking more parameters and allowing for a more accurate and confident identification.

23. In regards to claims 27 and 28, Puma discloses a system of identification of an individual that is based on movement information. Puma however does not disclose identifying an individual with biometrical data of the hands.

24. Faulkner discloses in step a. of column 7 that a picture of a handprint is taken. Step b. discloses the step of digitizing the image. As shown in figure 10, Faulkner directs the location of the hand by the design of the digitalization tray (70), which has pegs (71, 62, 73). This is the directing means, which is part of the larger unit that

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contains the imaging (detecting) means (11). Step c. in column 8 discloses the step of analyzing the image and compared with previous data to produce hand feature data. In step f. of column 9 Faulkner discloses comparing the hand data with a digital reference image.

25. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention use the hand recognition system disclosed by Faulkner with the system disclosed by Puma to determine a person's identity. By adding in the hand recognition method disclosed by Faulkner Puma's system will have more redundancy, checking more parameters and allowing for a more accurate and confident identification.

26. In regards to claim 29, as shown in the rejection of claim 28 Puma in view of Faulkner discloses a detector comprising of a digitizing tray. That tray was shown to control the hand movements of a person, forcing the hand into a rated position. An image of the finger is then taken. This image is a fingerprint. As the detector only allows the fingers to be in rated positions the detector will only detect the finger when it is in a rated position.

### ***Response to Arguments***

27. Applicant's arguments filed 02/28/05 have been fully considered but they are not persuasive.

28. Applicant's arguments with respect to claims 1 – 3 and 21 – 31 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

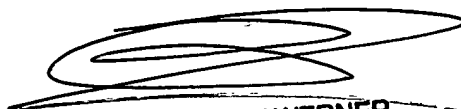
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLL



**BRIAN WERNER**  
**PRIMARY EXAMINER**